UNDESCRIBED SPECIES OF TIPULIDAE FROM THE WESTERN UNITED STATES

(Diptera)

PART II

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The preceding part under this title was published in the Pan-Pacific Entomologist, 20:91-97; 1944. Most of the species described at this time are from the extensive Melander Collection, and were taken in Washington and northern Idaho by Dr. Melander. I wish to express my deep thanks to Dr. Melander for permitting me to retain the types of those species that were based on single specimens. All of the species discussed herewith belong to the single tribe Hexatomini, extensively developed in our western states.

Dactylolabis imitata Alexander, new species

Male. Length about 10 mm.; wing 10 mm.

Generally similar to *damula* and *pteropoecila*, differing conspicuously in the details of wing pattern and the venation.

Wings with the ground whitish subhyaline, the prearcular and costal cells clearer yellow; a heavy brown pattern, as follows: Postarcular, in bases of cells *R* and *M*, more extensive in the former; a major area at origin of *Rs*, continued across cells *R* and *M* to vein *Cu*, vaguely broken by a pale seam in cell *R* adjoining vein *M*; a relatively narrow but complete crossband at the cord; other major darkenings at R_{1+2} and R_2, the outer end of cell *1st* M_2 and the fork of M_{1+2}; a narrow, continuous brown seam along vein *Cu*, chiefly in cell Cu_1 and immediately behind vein Cu_2; a similarly narrow seam along vein *2nd A*; veins brownish yellow, darker in the patterned areas. Venation: *Sc* long, both Sc_1 and Sc_2 ending beyond the fork of R_{2+3+4}, the latter very short, subequal to or shorter than the basal section of *Rs*; cell *1st* M_2 large, *m* and the basal section of M_3 subequal in length; *m-cu* more than three-fourths its own length beyond the fork of *M*.

The most similar described species is *Dactylolabis pteropoecila* (Alexander) which has the wing pattern almost the same but much more restricted, and which differs in important venational details, as the longer R_{2+3+4}, the lengthened cell *1st* M_2, and the unusually long *m*. *D. damula* (Osten Sacken) is more

distantly related, differing particularly in the short *Sc*, strongly upcurved veins R_3 and R_4, and the position of *m-cu* before the fork of *M*.

Habitat. CALIFORNIA (MARIN COUNTY).

Holotype, ♂, LAGUNITAS CAÑON, March, 1939 (through Mont A. Cazier).

Limnophila (Prionolabis) scaria Alexander, new species

Allied to *vancouverensis*; size medium (wing, male, 9 mm.); general coloration heavily gray pruinose, the praescutum with indications of three darker stripes; antennae 16-segmented; femora brownish yellow, the tips broadly brownish black; wings brownish yellow, restrictedly patterned with brown; male hypopygium with the outer dististyle conspicuously toothed on mesal edge, the lowest of these teeth expanded into a flange; inner dististyle elongate-oval, terminating in a mass of spinous points, before apex on outer face with a short, stout, spinous lobe; gonapophyses slender-stemmed, at apex widening into an elongate blade that tapers gradually into a long spinous point.

Male. Length about 8.5 mm.; wing 9 mm.

Rostrum and palpi black. Antennae 16-segmented, black throughout, the scape pruinose; flagellar segments oval, the terminal one cylindrical, about one-fourth longer than the penultimate. Head black, heavily gray pruinose.

Pronotum gray. Mesonotum blackened, gray pruinose, but leaving indications of three opaque praescutal stripes, the median one broader; posterior sclerites of notum less heavily pruinose. Pleura black, gray pruinose; dorsopleural membrane restrictedly buffy. Halteres pale yellow throughout. Legs with coxae black, pruinose; trochanters brownish black; femora brownish yellow, clearer yellow basally, the tips passing into brownish black, including the distal third to fourth; tibiae and basitarsi obscure brownish yellow, the tips narrowly infuscated; remainder of tarsi black. Wings with a brownish yellow suffusion, the prearcular and costal fields clear light yellow; stigma oval, darker brown; relatively distinct, paler brown clouds at origin of *Rs*, over cord and outer end of cell *1st* M_2, as a seam along vein *Cu*, and as less evident cloudings on outer radial veins and *2nd A*; veins brown, yellow in the brightened fields. Venation: R_{2+3+4} a trifle longer than *m–cu* or approximately twice *r–m*; R_{2+3} weakly sinuous; petiole of cell M_1 subequal to the cell; *m–cu* at near midlength of cell *1st* M_2.

Abdominal tergites brownish black, more infuscated medially, the darkest color being on the lateral and posterior portions of the individual segments; basal sternites more reddish brown, the outer segments, including hypopygium, more uniformly blackened. Male hypopygium with the tergite rather deeply notched, the lobes obtuse at tips, the entire caudal emargination and lobes provided

with microscopic setulae from small papillose bases. Outer dististyle with its mesal edge conspicuously toothed, on the more basal portion dilated into a flange; outer surface of style microscopically squamose; outer lobe closely appressed to the style. Inner dististyle generally elongate-oval in outline, without a clearly defined basal lobe as is common in the subgenus; style narrowed outwardly, the entire apex produced and densely beset with strong black spines, those on the ventral aspect longer and stouter, on the outer margin small and appressed but stout, interspersed with a few long setae; on outer margin before the spinous tip a short lobe that terminates in an acute spine. Gonapophyses slender-stemmed, at apex widened into an elongate blade that tapers gradually into a long spinous point. Aedeagus broadly flattened.

Habitat. WASHINGTON (SNOHOMISH COUNTY).

Holotype, ♂, INDEX, August 2, 1917 (Melander).

Although generally similar to *Limnophila* (*Prionolabis*) *vancouverensis* Alexander, there seems to be no question of the specific distinctness of the present fly. It differs evidently in the structure of the male hypopygium, particularly of the inner dististyles and the gonapophyses.

Limnophila (Prionolabis) gruiformis Alexander, new species

Size medium (wing, male, 10 mm. or less); general coloration gray, the median praescutal stripe more blackened; antennae 16-segmented, the more proximal flagellar segments with lower face slightly protuberant; femora yellow, the tips narrowly brownish black; wings yellowish, the stigma and seams over *Cu*, cord and outer end of cell *1st* M_2 darker; male hypopygium with the tergal lobes slightly divergent and microscopically scabrous; outer dististyle narrow, with only a single well-developed denticle before the long apical spine; inner dististyle with a long blackened rod on outer face, teeth of outer portion of style along outer margin conspicuously appressed; gonapophyses with the stems rather strongly sclerotized, near tip narrowed into a slender spine that is bent at a slight angle; aedeagus broadly flattened.

Male. Length about 8:5-9 mm..; wing 9.5-10 mm.; antenna about 1.9-2.0 mm.

Rostrum and palpi dark brown. Antennae 16-segmented; scape and pedicel brownish black, the former more or less pruinose; flagellum brown, the outer segments somewhat darker; basal flagellar segment pyriform, succeeding segments short-suboval, the lower face somewhat protuberant; intermediate segments oval, the outer ones passing into long-cylindrical; terminal segment about one-third longer than the penultimate. Head gray.

Pronotum dark gray. Mesonotum chiefly gray, the praescutum with the broad median stripe more blackened and defined, less

heavily pruinose to subnitidous; posterior sclerites of notum less heavily pruinose, posterior portions of scutal lobes reddened. Pleura black, heavily gray pruinose; dorsopleural membrane gray in front, more buffy yellow behind. Halteres yellow. Legs with the coxae gray pruinose; trochanters obscure yellow, more blackened apically and beneath; femora yellow, the tips rather narrowly brownish black; tibiae and basitarsi obscure yellow, the tips more narrowly darkened; remainder of tarsi blackened. Wings with the ground color yellowed, the prearcular and costal fields clearer yellow; stigma long-oval, dark brown; less evident dark seams along cord, outer end of cell *1st* M_2 and along vein *Cu*; veins brown, yellow in the luteous fields. Venation: R_{2+3+4} longer than the basal section of R_5; petiole of cell M_1 subequal to or longer than the cell; cell *1st* M_2 varying from rectangular to long-rectangular, with *m-cu* at from one-third to beyond midlength.

Abdomen black, gray pruinose, hypopygium concolorus. Male hypopygium with the median region of tergite slightly produced, with a broad U-shaped median notch, the lateral lobes microscopically scabrous, slightly divergent. Outer dististyle with its outer portion narrow, with only a single strong denticle, with indications of a second low point before midlength to the tip of the strong terminal spine. Inner dististyle with a long black rod on outer face, this subequal in length to the remainder of the style beyond it; the latter with a series of about ten low appressed black teeth along the outer margin; a conspicuous fleshy lobe on mesal face at base. Gonapophyses with stem rather strongly sclerotized, straight, slightly widened outwardly, near apex narrowed into a long slender spine that is bent at a slight angle from the axis. Aedeagus broadly flattened.

Habitat. IDAHO (LATAH COUNTY).

Holotype, ♂, MOSCOW MOUNTAIN, July 7, 1918 (Melander) Melander Collection. *Paratopotype*, ♂, in author's collection.

Limnophila (*Prionolabis*) *gruiformis* is well-distinguished from other similar regional species by the structure of the male hypopygium, particularly the tergite, both dististyles and the gonapophyses. The inner dististyle and gonapophysis are somewhat as in the eastern Nearctic *L.* (*P.*) *walleyi* Alexander but the structure of the outer dististyle is quite distinctive.

Limnophila (Phylidorea) snoqualmiensis Alexander, new species

General coloration of thorax varying from reddish brown to brownish black, the surface more or less pruinose; fore femora extensively blackened, the remaining femora with only the tips darkened; wings with a very restricted dark pattern; abdominal tergites yellowish brown, sternites clear yellow, the outer segments

extensively black; male hypopygium with the tergite produced into two small darkened lobes, one on either side of a deep medium notch; inner dististyle unusually slender, not angularly bent at near midlength; lateral gonapophyses long and slender, narrowed to the simple tips.

Male. Length about 9.5 mm.; wing 10 mm.

Rostrum and palpi black. Antennae with scape black, pedicel yellowish brown, flagellum pale brown; flagellar segments passing through long-oval to subcylindrical, provided with long conspicuous verticils. Head uniformly gray; anterior vertex about three times the diameter of scape.

Thoracic notum of type almost uniformly blackened, sparsely pruinose, pleura concolorous, the propleura paler; in paratype, color much more reddish brown, sparsely pruinose or pollinose, giving a brown or fulvous brown appearance. Halteres with stem whitened, knob weakly darkened. Legs with coxae and trochanters reddish yellow; femora yellow basally, the tips blackened, very broadly so on fore legs where the outer three-fourths to four-fifths is included, narrow on the middle and posterior legs, involving the outer eighth to tenth; all tibiae obscure yellow, the tips very narrowly darkened; tarsi passing through light brown to brownish black. Wings whitish yellow, the prearcular and costal fields light yellow; stigma relatively small but conspicuous, dark brown; very narrow and inconspicuous brown seams over cord and outer end of cell *1st* M_2; wing tip very vaguely infuscated; veins brown, more yellowed in the brightened portions. Venation: *Rs* short and angulated to more elongate and arcuated, the greatest length (type) about three times R_{2+3+4}; cell M_1 subequal to its petiole; *m-cu* at or near midlength of cell *1st* M_2.

Abdominal tergites yellowish brown, sternites clear yellow, the outer segments, involving seven, eight and part of nine, uniformly blackened to form a ring, the remainder of hypopygium chiefly castaneous. Male hypopygium with the median region of posterior border of tergite bearing a small oval darkened lobe on either side of a deep median incision, the lobes abundantly setuliferous; lobes subtended on either side by a glabrous, more reddish flange; no concentration of setae near the caudal border, as in *adusta* and allies. Outer dististyle flattened, glabrous, slightly expanded before the abruptly narrowed apical portion. Inner dististyle unusually slender, strongly curved, not angularly bent at near midlength as in related species. Lateral gonapophyses long and slender, blackened, gradually narrowed to the simple tips. Inner paired gonapophyses or branches of adeagus blackened, not expanded at their tips.

Habitat. WASHINGTON (KITTITAS COUNTY).

Holotype, ♂, SNOQUALMIE PASS, June 29, 1924 (Melander); Melander Collection. *Paratopotype,* ♂, in author's collection.

The present fly is closely related to *Limnophila* (*Phylidorea*)

columbiana Alexander, of northwestern British Columbia, differing especially in the details of structure of the male hypopygium, particularly the tergite, where the lobes are deeply divided, and the lateral gonapophyses, which are more slender, tapering to the acute tips. In this subgenus, what both Edwards and I had interpreted as being the innermost set of gonapophyses now appears to represent lateral branches of a profoundly trifid aedeagus. Several groups of Tipulidae are now known with this organ deeply bifid or trifid.

Shannonomyia albomanicata Alexander, new species

General coloration of thorax brownish yellow, without pattern; femora obscure yellow, tips narrowly infuscated; tarsi snowy-white; wings with a strong brownish-yellow suffusion; Sc_1 ending about opposite six-seventh the length of the long *Rs*, the latter subequal to vein R_4; inner ends of cells R_4, R_5 and *1st* M_2 in transverse alignment; cell M_1 lacking.

Female. Length about 6 mm.; wing 6.2 mm.

Rostrum and palpi brown. Antennae brown, the flagellum somewhat lighter colored; flagellar segments oval, the terminal one elongate, nearly twice the penultimate; verticils slightly exceeding the segments. Head dark brownish gray.

Thoracic dorsum light brownish yellow, without pattern, the lateral margins somewhat brighter; pseudosutural fovea and tuberculate pits pale, concolorus with the integument, the latter placed near the cephalic border of praescutum. Pleura a little more yellowish, the surface with a vague pruinosity. Halteres elongate, stem yellow, knob weakly infuscated. Legs with the coxae and trochanters yellow; femora obscure yellow, the tips narrowly and inconspicuously infuscated; tibiae pale yellow, the tips even more narrowly darkened; tarsi snowy-white, the terminal segment darkened; tibiae spurred. Wings with a strong brownish yellow suffusion, the prearcular and costal fields clearer yellow; veins brownish yellow, clearer yellow in the more brightened fields. Macrotrichia on veins beyond cord, lacking on *Rs*, R_{2+3} and on most of the veins enclosing cell *1st* M_2. Venation: *Sc* short, Sc_1 ending about opposite six-sevenths the length of the long *Rs*, the latter subequal to vein R_4; R_{2+3+4} short, a little exceeding the basal section of R_5; R_2 faint, subequal to R_{1+2}; inner ends of cells R_4, R_5 and *1st* M_2 in transverse alignment; cell M_1 lacking; cell *1st* M_2 long, narrowed outwardly, *m* being only about one-half the basal section of M_3, the cell a trifle longer than vein M_3 beyond it; *m-cu* at three fifths the length of M_{3+4}.

Abdomen light brownish yellow, the sternites somewhat clearer yellow. Ovipositor with valves long and slender, the cerci straight and unusually long.

Habitat. WASHINGTON (PACIFIC COUNTY).
Holotype. ♀, ILWACO, June 28, 1925 (Melander).

The reference of this curious fly to *Shannonomyia* Alexander must be held to be somewhat provisional but on the basis of the short subcosta and the loss of cell M_1, it agrees more closely than with *Limnophila.* The one discordant venational feature is the long *Rs* which is much longer than in the other described Nearctic species. The discovery of the male sex may result in assigning the species elsewhere. The fly is readily told from all other regional species of Hexatomini by the white tarsi, in conjunction with the loss of cell M_1 of the wings.

NOTES ON THE HABITS OF THE PREDATOR CYMATODERA OVIPENNIS SAY WITH A DESCRIPTION OF THE PUPA

(Coleoptera, Cleridae)

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During a study of the aculeate Hymenoptera using the living and dead branches of *Sambucus* for nesting purposes, two beetle larvae were found that proved to be *Cymatodera ovipennis* Say.[1] Blaisdell (1892) has recorded larvae of this species from burrows of the cerambycid *Ipochus fasciatus* in southern California. A summary of the food habits of this species by Böving and Champlain (1920) states that it is "a predator on Lepidopterous larvae infesting cones of *Pinus jeffreyi*; reared from cones of *Pinus ponderosa* and *Pseudotsuga taxifolia*; from Piñon pine infested with *Carphoborous* and *Callidium.*" These records on secondary woodboring Coleoptera are similar to those given by the same authors for *Cymatodera undulata* Say, which was subsequently reared by W. V. Balduf (1926) from the bur oak galls made by the cynipid, *Disholcaspis mamma* Walsh. This paper is designed to increase the knowledge of the biology of this species and to illustrate and describe the pupa.

[1] Determination by E. G. Linsley.